

Name:

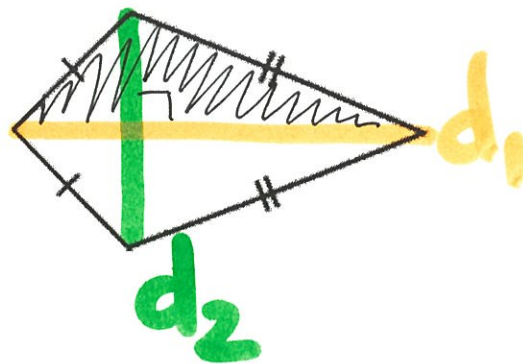
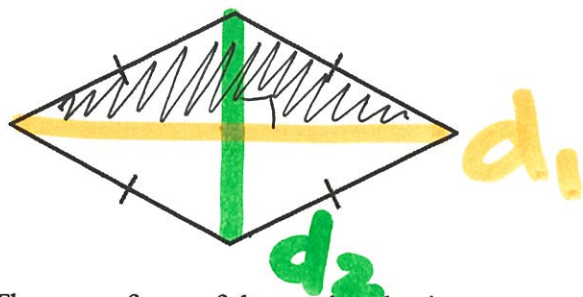
Date:

Period: 3

Areas of Rhombuses and Kites

on Objective INBAT find areas of rhombuses and kites

You can divide a rhombus or kite with diagonals d_1 and d_2 into two congruent triangles.



The area of one of those triangles is:

$$A = \frac{1}{2}bh = \frac{1}{2}(d_1)\left(\frac{1}{2}d_2\right) = \frac{1}{4}d_1d_2$$

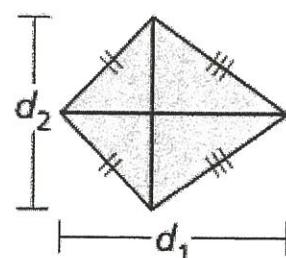
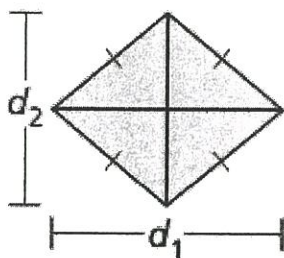
Thus, the area of the rhombus or kite is:

$$A = 2\left(\frac{1}{4}d_1d_2\right) = \frac{1}{2}d_1d_2$$

Area of a Rhombus or Kite

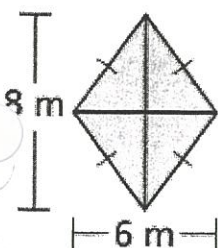
The area of a rhombus or kite with diagonals d_1 and d_2 is:

$$A = \frac{1}{2}d_1d_2$$



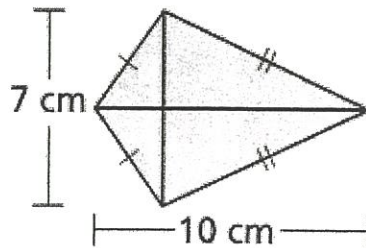
Examples:

1. Find the area of the rhombus.



$$\begin{aligned} A &= \frac{1}{2}(8)(6) \\ &= 4(6) \\ &= 24 \text{ m}^2 \end{aligned}$$

2. Find the area of the kite.



$$\begin{aligned} A &= \frac{1}{2}(10)(7) \\ &= 5(7) \\ &= 35 \text{ cm}^2 \end{aligned}$$